

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Amended) An IR dryer, for use in drying a continuous paper web by means of IR radiation, comprising:

an array of IR emitters arranged, in use, in spaced relation to the paper web;

a lamp protection plate intermediate the IR emitters and the paper web;

characterized in that at least one of the lamp protection plate and the array of IR emitters is curved whereby drying a paper web which moves in a curved path is facilitated.

2. (Original) An IR dryer as claimed in claim 1 wherein each of said IR emitters is a lamp comprising a heating element located within a curved quartz tube.

3. (Original) An IR dryer as claimed in claim 1 wherein each of said IR emitters is gas-powered.

4. (Previously Amended) An IR dryer as claimed in claim 1 wherein said lamp protection plate comprises an array of curved quartz tubes.

5. (Previously Amended) An IR dryer as claimed in claim 4 wherein said lamp protection plate is cooled, in use, by the passage of gas through said curved quartz tubes.

6. (Previously Amended) An IR dryer as claimed in claim 1 further comprising a curved reflector plate.

7. (Previously Amended) An IR dryer, for use in drying a continuous paper web by means of IR radiation, comprising:

an array of IR emitters arranged, in use, in spaced relation to the paper web;

a lamp protection plate intermediate the IR emitters and the paper web; characterized in that the lamp protection plate comprises a plurality of quartz tubes arranged in an array.

8. (Previously Amended) An IR dryer as claimed in claim 7 wherein the lamp protection plate is cooled in use, by the passage of gas through said quartz tubes.

9. (Previously Amended) An IR dryer as claimed in claim 7 wherein said IR emitters are lamps, each comprising a quartz tube, substantially identical to those used in the lamp protection plate, in which is located in an IR heating element.

10. (Previously Amended) An IR dryer as claimed in claim 7 wherein said quartz tubes are curved.

11. (Currently Amended) A method of bending an elongate quartz tube comprising the steps of:

supporting the tube in a substantially vertical orientation;
gripping the tube near its uppermost end;
heating the tube at region intermediate its lowermost end and the uppermost end; and
moving the gripped uppermost end of the tube by pulling said uppermost end so that the tube, softened in the vicinity of the heating region, is bent.

12. (Original) A method as claimed in claim 11 wherein the gripped uppermost end of the tube is moved in an arc.

13. (Previously Amended) A method as claimed in claim 11 wherein the tube is counterbalanced.

14. (Previously Amended) A method as claimed in claim 11 wherein the lowermost end of the tube is constrained to move in a substantially vertical path.

15. (Currently Amended) Apparatus for bending an elongate quartz tube comprising: support means for supporting the tube in a substantially vertical orientation, said support means including a follower attached to a lowermost end of said tube; gripping means for gripping the tube near its uppermost end; heating means situated at a region intermediate the lowermost end and the uppermost end of the tube; and driving means for moving the gripped uppermost end of the tube, in use, so that the tube, softened in the vicinity of the heating means, is bent.

16. (Original) Apparatus as claimed in claim 15 wherein the heating means substantially surrounds the tube, in use.

17. (Previously Amended) Apparatus as claimed in claim 15 wherein the heating means comprises a plurality of gas burners.

18. (Previously Amended) Apparatus as claimed in claim 17 wherein the plurality of gas burners comprises a ring of gas burners, in the center of which the tube is situated, in use.

19. (Currently Amended) Apparatus as claimed in claim 15 further comprising barrier means which has a curved surface against which the tube abuts may abut, in use; so as to prevent lateral movement of the tube.

20. (Original) Apparatus as claimed in claim 19 wherein the barrier means comprises a wheel.

21. (Previously Amended) Apparatus as claimed in claim 20 wherein the wheel is removable and replaceable with a wheel of different diameter.

22. (Previously Amended) Apparatus as claimed in claim 15 further comprising a counter-balance arrangement by means of which the lowermost end of the tube can be constrained in use, to follow a substantially vertical path.

23. (Previously Amended) Apparatus as claimed in claim 15 wherein said driving means comprises a pivotable arm, at one end of which is situated said gripping means, the arm being pivotable, in use, so that the gripping means generally describes an arc.

24. (Previously Amended) Apparatus as claimed in claim 23 wherein a pivot point of said pivotable arm is, in use, substantially horizontally level with a desired region of bending of the tube.

25. (Previously Amended) Apparatus as claimed in claim 23 wherein said pivotable arm is driven by a motor.

26. (Previously Amended) Apparatus as claimed in claim 15 wherein said gripping means is water-cooled.

27. Cancelled

28. Cancelled

29. (Currently Amended) An IR dryer for drying a continuous web of paper use in the papermaking industry comprising:

a drying cylinder for moving the web of paper;

an array of curved lamps spaced from the cylinder, each of which lamps includes an IR heating element located within a corresponding curved quartz tube; and

a curved lamp protection element placed between said web of paper and said array of curved lamps.

30. An IR dryer as claimed in claim 29 further including a curved reflector plate.

31. Cancelled.

32. (New) An IR dryer as claimed in claim 29, wherein:

said lamp protection element comprises a plurality of additional quartz tubes arranged side by side and adjacent tubes of said plurality of additional quartz tubes being in contact with one another thereby forming a continuous curved lamp protection element.

33. (New) An IR dryer, as claimed in claim 32, wherein:

said plurality of additional quartz tubes have a longitudinal axis extending in a same direction as movement of the web of paper.

34. (New) An IR dryer, as claimed in claim 29, wherein:

said array of curved lamps has a longitudinal axis extending in a same direction as movement of the web paper.